Institute of Actuaries of India

Subject SA3 – General Insurance

July 2022 Examination

INDICATIVE SOLUTION

Introduction

The indicative solution has been written by the Examiners with the aim of helping candidates. The solutions given are only indicative. It is realized that there could be other points as valid answers and examiner have given credit for any alternative approach or interpretation which they consider to be reasonable.

Solution 1:

i) Practical Considerations:

It needs to be decided/ascertained whether the target company would operate independently post acquisition (as a subsidiary) or would be integrated with the acquiring company's in-country operations (foreign branch). [1 mark]

Accordingly, the following considerations would ensue on both sides of a cross-border acquisition deal:

- Business synergies and interactions arising from acquisition
- Regulatory approvals and periodic reporting requirements
- Legislative requirements and legal compliance
- Political stability and medium to long-term view of the economic environment
- Taxation and jurisdictional tax laws and optimum tax strategies
- Foreign Direct Investment restrictions, profit repatriation laws
- Entry, exit or operational barriers (e.g., expropriation of foreign assets)
- Group / consolidated accounting requirements, capital structure and solvency requirements
- Stock exchange listing requirements and capital market restrictions
- Foreign exchange and currency fluctuation issues and laws around currency convertibility
- Due diligence to protect shareholder interests for both acquirer and target companies
- Seamless integration of soft assets with the acquirer's business viz., human resources management, talent acquisition and nurturing, blending cultural or language differences

[0.5 marks per point]

[Max 5]

ii)

a)

1. Representation & Warranty Insurance:

Key features:

- May be taken by acquiring company (buy-side) or target/selling company (sell-side)
- Buy-side policies protect the acquirer (buyer)from potential misrepresentations and fraudulent assurances by the seller in an acquisition deal
- Likely to be a one time premium at the time of the deal (since the selling company would potentially cease to exist once the deal goes through – 'no survival')
- Depending upon agreed terms and conditions, the acquiring company may purchase the cover or insist on this cover being purchased by the seller

[1 mark per point subject to a maximum of 2]

[Maximum 2 marks]

Likely Coverages:

- Likely to cover only known representations and warranties that form part of the deal, i.e., past and expected future revenue, customers, IPRs, tax-breaks, licenses, and permissions, etc.
- Coverage is likely to be for a specific period and up to a specified amount
- Known caveats but undisclosed by the seller that could have affected the deal may be covered (fraudulent representation by the seller)
- The policy is likely to be subject to deductibles (borne fully by the seller or shared between the buyer and seller depending upon the agreed terms)
- There can be a waiting period (to ensure the buyer does not neglect conducting due diligence just because there is an insurance carrier to indemnify)

[1 mark per point subject to a maximum of 2]
[Maximum 2 marks]

Likely Exclusions:

- Deficiencies and defects in the seller's assets / business that the buyer/acquirer can be deemed to be reasonably aware of prior to signing the deal, are likely to be excluded
- Any specific known issues (whether specific to the industry, or to the jurisdiction in case of cross-border M&As, or to the specific deal) are likely to be excluded as the probability of their occurrence is almost certain
- Any seller representation / warranty that is not fully in control of the seller (e.g., expected government subsidies, or tax credits, or winning a tender) is likely to be excluded
- Unknown events and reasonably unanticipated developments, or unseen lawsuits are likely to be excluded (e.g., if business projections that formed part of deal are impacted adversely because of a pandemic, or an employee lawsuit after the deal closing, etc.)

[1 mark per point, subject to a maximum of 2]
[Maximum 5 marks]

2. Tax Liability Insurance:

Key features:

- Usually taken by the acquiring company (buyer)
- May be taken by the seller as an incentive to attract buyers if they intend to sell their stake expeditiously
- Protects the buyer from potential uncertainties around validity of the tax position considered in an acquisition deal or where the quantum of tax cannot be ascertained in the due diligence process
- Usually, the insurance premium is a precise one-time cost
- The period of insurance is usually pre-defined and dependent on the applicable tax laws and any limitation period applicable for taxation authorities to lay claim

[1 mark per point subject to a maximum of 2]

Likely Coverage:

Tax liability insurance protects the insured (the taxpayer) against monetary losses incurred in the event the taxation authority challenges its tax payments.

There are usually deductibles in the form of retention amounts or it may be a co-share arrangement. The maximum amount of indemnity is fixed and likely to cover:

- The final ascertained amount of tax payable to the authorities on
- legal expenses involved in defending the tax challenge
- interest, fines, and penalties
- including any taxes applicable on insurance proceeds (grossing-up)

[Maximum 2 marks for coverages]

Likely Exclusions:

- Likely to exclude fraudulent misestimation of taxes by the insured
- Likely to exclude cases where tax treatment was incorrectly estimated and paid due to negligence or lack of due diligence by insured
- Exclusion of future tax demands not existing at time of policy inception Tax liability arising on retrospective tax demands (i.e., new tax rates applicable for past periods) are usually excluded,

although such coverages may be provided for an additional premium to meet the needs of the parties of an M&A deal

[Maximum 2 marks for exclusions]

[Maximum 5 marks]

3. Title Insurance:

Key features:

- Usually taken by the acquiring company (buy-side)
- Protects the acquirer (buyer) from potential deficiencies in the seller's title to shares in the target company and defects in the target company's assets from risks existing at the time of closing the deal but discovered at a later date
- Usually, one time premium paid at the time of acquisition
- Like any other title insurance, the cover usually lasts in perpetuity, or for as long as the acquirer (the insured) holds interest in the business/asset in question (or may be subject to any period of limitation as per applicable laws)

[1 mark per point subject to a maximum of 2]

Likely Coverage:

The cover is likely to indemnify the buyer if the seller (the shareholders of the target company) does not have legal capacity to transfer the shares, partly or wholly or if the target company has invested in assets / properties with a defective title.

There are usually no deductibles or waiting periods. The amount of insurance may be fixed or determined by the actual monetary loss incurred by the insured. It also usually covers litigation expenses involved in defending a property title against an attacking lawsuit.

[Maximum 2 marks]

The defect in title may arise from:

- The seller is found to not be the legal owner of shares, partly or wholly
- The shares partly or wholly are found to be encumbered in some form
- The title to shares is defective for some other reason
- A third-party claims to have a cleaner title to shares
- The target company has invested in defective assets (i.e., the title to assets does not vest with the company) or has invested in shares of another company with a defective title
- The target company has defects in its incorporation / registration

[Maximum 2 marks for coverage]

Likely Exclusions:

- Known mortgages, charges, or encumbrances that existed as of closing the deal and reported in the due diligence process
- Known mortgages, charges, or encumbrances that existed as of closing the deal and that could have been discovered with reasonable due diligence processes
- Any defective title arising at a future date not owing to causes/risks known or existing as on date of closing the deal are likely to be excluded
- Exclusion of expropriation or confiscation of assets of the target company by the Government under law at a future date unless the same was a known risk at the time of closing the deal
- Exclusion of physical destruction of assets owned by the target company due to pollution, contamination, war, terrorism, and other external events

[Maximum 5 marks]

4. Litigation buyout Insurance:

   Key features:

- Provides cover for disclosed contingent issues arising within the context of a wider M&A deal
- While both parties agree there is a contingent liability, neither party may be willing to accept the risk allocation of such a liability.
- Usually taken by the buyer side – the acquirer company being the insured
- The recognised liability is passed on to the insurance company and removed from the transaction negotiations
- Premium is often one-time and may be shared between both parties of an acquisition deal
- The period of insurance may be pre-defined or unlimited depending on the term of the contract that is giving rise to the lawsuit and any period of limitation, as may be applicable

[Maximum 2 marks for key features]

Likely Coverage:

- This coverage would only be available for defendants (parties against whom a lawsuit is filed) and not plaintiffs (those that initiate the lawsuit). This is to ensure that the outcome of the lawsuit is a contingent event and not in the insured's control
- Likely to cover defence costs and quantum of liability
- The insured amount may be fixed monetarily or subject to a predetermined court award inflation in which case premiums may be charged periodically till such contingent lawsuit materialises
- Subject to fixed amount retention/deductible by the insured or on a co-share basis
- Likely going to specify the trigger events that could initiate a lawsuit against the insured

[Maximum 2 marks for coverage]

Likely Exclusions:

- Settlements entered into between the plaintiff and defendant (the insured) without the insurer's consent – to prevent moral hazard
- Litigation and defence costs above a certain threshold incurred without the insurer's knowledge or consent
- Losses arising from the insured's failure to cooperate
- Lawsuit arising from trigger events not specified in the policy coverage
- Where information that could jeopardise the contingency of a lawsuit was not disclosed to the insurer
- Appeal costs may be excluded although for an additional premium, these may also be covered

[Maximum 5 marks]

5. Environment Liability Insurance:

   Key features:

- Considering the catastrophic consequences of environmental damages, it is essential for companies to evaluate, mitigate and protect against these risks
- Eliminates a common source of uncertainty for both parties to the deal by offloading environmental risk to the insurer.

- Premium is usually one-time and taken by the buyer to protect itself, though premium may be shared between the buyer and the seller
- Deductibles / retentions are defined and may be dependent on declarations by the target company

[Maximum 2 marks]

Likely Coverage:

- Pollution of natural ecology (Soil, air, water)
- Noise pollution
- Damage to natural resources
- Offensive odour from waste emanation or usual business operations
- Dumping waste on insured property (fly-tipping)
- Third-party damage on insured premises or arising from insured's operations
- Oil storage pollution through spillage or leakage
- Legal expenses and defence costs
- Any other customised cover needed (e.g., exposure to crypto currency leading to electronic waste, CO2 emissions, etc)

[Maximum 2 marks for coverage]

Likely Exclusions:

Standard exclusions are likely to be similar to common pollution liability insurance, viz.,

- War and terrorism
- Asbestos and lead exclusions or any other as per government stipulations
- Damage caused by negligence or non-compliance
- Environmental pollution arising out of business operations outside the insured premises
- Non-disclosure of known potential hazards by the insured (e.g., underground waste dumps)

[Maximum 5 mark]

[Max 25]

b) The general insurance company that is going to acquire another general insurance company may not need environmental impairment liability insurance as part of its acquisition deal. This is because it is very unlikely for the overseas general insurance company (the target company) to be engaged in business activities that could lead to environmental damage/pollution as part of its usual business operations.

[Max 2]

[32 Marks]

Solution 2:

i) Challenges faced by aviation industry:

Major challenges faced by the aviation industry during the pandemic were:

- total or partial airspace closure in most countries leading to cancellation of most scheduled flights
- sudden cashflow pressures arising from mass refunds coupled with revenues plummeting causing a major liquidity crunch for airlines
- increased risk of insolvency with hardly any flights operating
- increased risk for crew members and passengers particularly on aircrafts conducting evacuation/repatriation operations

- most aircrafts were grounded (commercial and private aircrafts) and thus exposed to extreme conditions although cargo air transport continued with a number of passenger aircrafts converted to carry goods and cargo
- most aircrafts that were grounded had to incur parking costs and ongoing maintenance costs.

[1 mark per point]
[Maximum 3 marks]

Changing exposure and claims experience:

The nature of exposures has changed considerably since the pandemic began:

- With minimum number of aircrafts actually flying, the risk of accidents or crashes reduced
- However, grounded airplanes were exposed to risks such as accumulation, damage during shunting, wildlife and weather-related vagaries like humidity/excess rainfall and flooding, and terrorist threats
- Where flights were operating, the insured airlines could be liable for virus contagion during flights, if appropriate biosecurity measures were not in place
- All aviation claims have seen a significant dip in frequency, particularly the 'slip and trip' accidents at airports and onboard flights because of reduced foot traffic
- With pilots, ground staff and cabin crew out of action for months, there may have been an increase in the risk of accidents, mid-air collisions arising from human error and equipment failure in the short to medium term upon operations resuming closer to normal
- Aircraft hull could have generated large claims if they were not maintained when grounded
- With standard exclusions like "any changes to uses and operations will need to be clearly communicated to insurers" in instance where airlines adapted their commercial fleet to operate cargo flights exposure may have reduced if the insured inadvertently missed informing insurers

[1 mark per point]
[Maximum 5 marks]

Changing insurance needs:

- The overall financial situation for the aviation industry will, in due course, determine whether insured parties continue to renew their aviation insurance policies and at what revised terms.
- Retrospective / adjustable insurance contracts might become more popular as such policies would have allowed downward adjustment of liability premium depending on the reduction in the number of passengers and also in hull premium for grounded aircrafts
- There could be an opportunity for insurers to design tailored products that satisfy both the needs of insured parties and the financial objectives of the aviation insurance market, after studying the repercussions of the pandemic for the aviation industry

[1 mark per point]
[Maximum 2 marks]
[Max 10]

ii) Challenges faced by Maritime passenger segment:

- Halt in port activities and delayed shipments & deliveries (adversely impacting supply chain)
- Increased risks for passengers and crew, quarantine costs and crew changeovers at ports
- Accumulations in ports: passenger ships and cruise liners docked at ports for extended periods, maintenance costs and wear and tear
- Reduced demand for new vessels

[1 mark per point, maximum 2 marks]

New risk exposures for insurance companies to meet additional insurance needs in the Maritime passenger segment:

- Quarantine costs:
  - The insurance companies may need to reimburse these costs particularly if a vessel is forced to comply with a quarantine order by health authorities
- Voyage deviation costs
  - Insurance coverage may be sought to cover costs if a vessel is forced to deviate from its intended voyage to provide medical treatment to a crew member, passenger or other person aboard the vessel. The insurer may need to typically reimburse the owner for these expenses
- Crew safety obligations
  - Expenses that could be incurred to take care of onboard crew that have fallen ill during the voyage and their immediate cure needs may create a need for insurance by the employer to cover these costs
- Loss of revenue
  - An insurance policy with an hours' clause may be sought for loss of revenue to ensure the vessel owners do not end up in a sudden liquidity trap to meet the unforeseen financial impacts of pandemics of such scale
- Port fines and charges:
  - Insurance cover for imposition of fines and penalties on vessels by health regulatory authorities not owing to negligence and / or illegal procedures in a quarantined/ restricted port
- Illness or death claims
  - Insurance solution for cruise owners to cover expenses relating to health examination, hospitalization, or medication if passengers fall ill onboard, including any death claims that may arise

[1.5 marks per point, maximum 6 marks]

[Max 8]

[18 Marks]

Solution 3:

i) Bundling insurance Covers:

- The existing micro insurance (MI) products are predominantly for covering dwellings and contents or live stock or tools or crop insurance against all perils, health insurance and personal accident with maximum sum insured being Rs 1,00,000. [0.5 mark]
- Existing MI products also includes policies issued to micro, small and medium enterprises (MSME) up to an annual premium of Rs 10,000 for each MSME. [0.5 mark]
- As per the existing regulations, an insurer carrying on life insurance business may offer life and general MI products, provided the life insurer has a tie up with an insurer carrying on general insurance business, and subject to the provisions of section 64 VB of the Insurance Act 1938, the premium attributable to the general MI product may be collected from the prospect (proposer) by the insurer carrying on life insurance business, either directly or through any of the distributing entities of MI products and made over to the insurer carrying on general insurance business: provided further that in the event of any claim stemming from the general MI product, the insurer carrying on life insurance business or distributing entities of MI products, as may be specified in the tie-up, shall forward the claim to the insurer carrying on general insurance business and offer all assistance for the expeditious handling of the claim. Similar arrangements can be put in place by a general insurer who wishes to offer life MI products along with its general MI products.

  [2 marks]
- Currently there are limited products in the market which offer combi life cum health cover and none in the MI segment [0.5 mark]

- As per the recommendations outlined in the report, Combi product be offered on a modular basis giving the customer the option to choose covers as per his or her needs be it cover for the individual or for the property. [0.5 mark]
- Ideally, the combi product shall be offered on an annually renewable basis. [0.5 mark]
- The following are recommended modules of the product:
  - Life cover with return of premium – SI of Rs 5 lakhs
  - Pension cover – annuity in the range of Rs 1,000 to Rs 5,000 per month
  - Non Life cover – Home insurance of SI Rs 5 lakhs
  - Shop insurance of sum insured of Rs 10 lakhs
  - Alternate accommodation / Increased cost of working due to claim in above cover with a sum insured of Rs 750 /- for maximum of 30 days
  - Personal accident cover with sum insured of Rs 3 lakhs
  - Critical illness with maximum SI of Rs 1 lakh
  - Hospi cash with maximum SI of Rs 2000 per day for 30 days
  - Health insurance with maximum SI of Rs 5 lakhs
  - Livestock insurance with maximum SI of Rs 2 lakhs
  - Crop insurance with maximum SI of Rs 2 lakhs
  - Poultry insurance with maximum SI of Rs 2 lakhs
  - Aquaculture insurance with maximum SI of Rs 2 lakhs
  - Loss of earnings cover with maximum SI of Rs 25,000

[0.25 mark for any cover mentioned subject to a maximum of 2.5 marks]

Underwriting considerations:

- Since a combi product has been proposed, underwriting of respective sections of life insurance, non-life insurance and health insurance have to be done by the respective insurance companies. [0.5 mark]
- The product must be filed on a modular basis by the respective insurers and combinations can be packaged at front end by the distributor depending on the insurer chosen [1 mark]
- Since it is a combi product, there needs to be a common platform across insurance companies for the purpose of quotation and policy issuance. This platform could be linked to the policy issuance and underwriting systems of individual insurers. [0.5 mark]
- Given that these products cover weaker socio economic segments, product pricing needs to be suitably customised [0.5 mark]

Sales:

- Dedicated MI agents can be used exclusively for marketing MI products and they will not be permitted to sell other products. [0.5 mark]
- A General insurance company has the option of appointing a MI agent for any of the sectors - Micro Enterprises or Small Enterprises or Medium Enterprises or for all three sectors or for a combination of two sectors. [0.5 mark]
- A General insurance company has the option of appointing a MI agent for various lines of business either independently for each line of business or a combination thereof for all lines of General Insurance business. [0.5 mark]
- It has been recommended that the Combi MI product may be solicited by all distribution channels authorized by IRDAI to distribute insurance products [0.5 mark]
- Online sales may also be permitted, wherever feasible, as this will increase last mile connectivity. [0.5 mark]
- Given that these are combi products, it may be essential to have a common platform across insurance companies for sales and distribution of the product. [0.5 mark]

Reinsurance:

- Given the target segment, availability of reinsurance may be difficult. [0.5 mark]
- Even if the reinsurance support is available, reinsurance rates may be too high which will in turn will impact affordability [0.5 mark]
- Given the low insurance penetration in the MI segment there may be reinsurers willing in participate. In [0.5 mark]
- In the absence of reinsurance support, insurers will have to underwrite such business to their net accounts which in turn will increase capital strain and might pose solvency issues. [0.5 mark]

Profitability:

- Profit margins will be lower for micro insurance products compared to traditional ones. [0.5 mark]
- There may be restrictions on profit margin loading in pricing of these products given the low ticket size. [0.5 mark]
- However, if economies of scale are achieved, it may be possible for the product to reach a profitable level. [0.5 mark]
- Also, since life cover, non-life cover and health insurance cover are sold together, per policy expense may be lower, which will increase product profitability [0.5 mark]

[Max 15]

ii)

a) Captive Insurer:

A Captive Insurance Company is an insurer that is wholly owned by an industrial or commercial enterprise and set up with the primary purpose of insuring the parent or associated group companies and retaining premiums and risks within the enterprise.

[Max 2]

b) Advantages and disadvantages of setting up a Stand-alone Micro insurer:

- It is proposed that the stand alone micro insurer will have a lower capital requirement of Rs 20 crores compared to the existing capital requirement of Rs 100 crores for a general insurance company. In view of the lower capital requirement, the cost of capital will be for promoters of the insurer. [1 mark]
- As the target segment is the rural and social sector, it is possible that compliance requirements may be streamlined and for ease of doing business, there may be relaxation in compliance norms. [0.5 mark]
- As micro insurance is a niche segment, there is an option to offer a variety of products – non life, health insurance, crop insurance, livestock insurance etc., This helps in achieving a better portfolio of balanced risks. [0.5 mark]
- Composite micro insurance companies, offering both life insurance and nonlife insurance business may be permitted, which will help in diversifying risks. [0.5 mark]
- Dedicated reinsurers for micro insurance segment may be promoted, which will help in managing risks better [0.5 mark]
- As the ticket size is lower compared to traditional insurance products, penetration of micro insurance products may be higher which will help the insurer achieve better economies of scale soon which in turn will aid in reducing operating costs of the insurer. [0.5 mark]
- Given the target market, it may be necessary to open branch offices in rural areas and tier 2 towns to improve accessibility to prospective customers This will result in lower rental costs for the insurer. [0.5 mark]
- Commission and other distribution costs are expected to be lower for this segment, hence the same may result in savings for the insurer compared to traditional lines of business [0.5 mark]

- There is a pricing risk associated with this product, as the insurer does not have expertise in pricing this segment. [0.5 mark]
- Target segment is perceived to be more risky in view of the socio economic status, which needs to be given special consideration in pricing. [0.5 mark]
- Also, stricter fraud control mechanisms need to be in place for such products. (0.5 mark)
- Such products are prone to mis-selling, hence it is necessary to have suitably trained agencies / intermediaries [0.5 mark]
- Since, it is a stand-alone micro insurer, the company loses the opportunity to underwrite risks in Marine, Aviation and other Commercial lines which otherwise would have led to a more diverse portfolio. [0.5 mark]
- There may be restrictions on premium charged or even on the rating factors that can be considered to protect policyholder interests. This may pose a pricing risk [0.5 mark]
- Higher advertising costs are likely to be incurred to increase awareness of micro insurance products and penetrating the market may be difficult. [0.5 mark]
- Given the low ticket size, the insurer may have top line challenges if adequate business volumes fall short of projections. [0.5 mark]
- Increased claims inflation stemming from supply chain constraints will make it difficult to offer low cost insurance products to this segment. Insurers are likely to incur underwriting losses which in turn will impact solvency.

[Max 8]
[25 Marks]

Solution 4:

i) Discounting of reserves

Cash Flow estimates and Best Estimate Liabilities:

- Under IFRS 17, if Premium Allocation approach (PAA) is used for estimation of liabilities, there is no requirement to discount the reserves. However, discounting of reserves is required under the Building block approach. [1 mark]
- If the liabilities are not discounted, there is already an inherent margin in reserves compared to discounted reserves which increases the level of prudence [0.5 mark]
- Long tail business viz., Motor Third Party Liability is most sensitive to discounting of reserves compared to short tail business. [0.5 mark]
- Whether both case reserves and IBNR will be discounted or only IBNR? [0.5 mark]
- Whether reserving triangles are available on an accident year basis or underwriting year basis? [0.5 mark]
- When the reinsurance ceding is material, it may be essential to discount gross reserves separately and reinsurance receivables separately, as the same are received with a lag in payment. It may not be appropriate to discount net of reinsurance claim reserves, as this will lead to incorrect estimates of liability. [1 mark]
- When discounting is introduced for the first time, it may lead to a huge one time release in reserves. [0.5 mark]
- It is essential to use the insurer's own historical payment data to project the timing of payments, to the extent that credible data is available. Any supplementary data that is used should reflect the insurer's payment pattern for the line of business under consideration This will pose problems for lines of business where credible experience is lacking [1 mark]
- Since timing of cashflow needs to be estimated, this will pose problems for insurers who rely on the Expected loss ratio method and Bornheutter Ferguson method for estimation of liabilities. [1 mark]
- Timing of future cash flow estimates will be consistent with internal and external conditions expected to prevail during the future payment period. For example, it should be consistent with the expected lag for MACT claims, compromise claims etc., [1 mark]

- If such conditions are expected to be different from those prevailing during the historical evaluation period, appropriate adjustments have to be made. It is essential to capture the change in settlement pattern, lag for legal claims etc., [0.5 mark]
- There are differences in materiality of various factors between undiscounted and discounted reserves. For example, a development factor at an advanced period (i.e., a "tail factor") is less material to a discounted reserve than to an undiscounted reserve. Conversely, a change in the timing of loss payments may be more material to a discounted reserve. To the extent that the materiality of a reserving assumption determines the amount of analysis that the same receives, the evaluation of a discounted reserve may require a change in emphasis on the assumptions analyzed. [1.5 mark]
- It may be essential to treat other allocated claim expenses viz., surveyor fees, legal fees etc., separately as they may not be incurred at the same time as the claims. The same applies to the treatment of salvage, subrogation and other insurance recoveries [1 mark]
- Since best estimate liabilities are to be estimated under IFRS17, it is essential to consider the probabilities of claim movements over time. [0.5 mark]

Discount Rate:

- IFRS 17 recommends two approaches for arriving at the discount rate: Top down approach and Bottom Up approach. [0.5 mark]
- Based on the bottom up approach, the discount rate is considered to be the risk free interest rate plus liquidity premium (which captures the difference in liquidity between insurance liabilities and underlying assets). [1 mark]
- For top down approach, the insurer first has to arrive at the weighted average return on the underlying portfolio of assets. From this, the credit risk component needs to be removed to arrive at the discount rate. [1 mark]
- Discount rate chosen has to be consistent with other cash flow estimates. For example,
  - If claim costs are increasing with inflation for example motor parts, building material., it is essential for the discount rate to incorporate inflation.
  - For Third Party death claims, it may be essential for the discount rate to incorporate judicial inflation.
  - Where the cashflows are nominal, it is essential to consider the real discount rate without inflation. [2 marks]
- When some of the cashflows vary based on inflation and few are real, it may be appropriate to take weighted average discount rate instead of separating the cashflows. [0.5 mark]
- Discount rates applied to the cashflows should reflect the characteristics of cashflow, time value of money etc. [0.5 mark]
- It is essential to determine whether to use a single discount rate or term structure of discount rate for arriving at the discounting value of the liabilities. [0.5 mark]
- Separate IT systems need to be developed if different discount rates are used for different durations and the difference in unwinding of discount rates needs to be captured over time. [1 mark]

Risk adjustment for non-financial risk

- Since liabilities are being discounted there is no margin which otherwise would have been available under undiscounted liabilities. In view of the same, it is essential to incorporate a risk adjustment component [0.5 mark]
- The same is the margin between liabilities which are volatile in nature and fixed cash flows. [0.5 mark]
- As per the IFRS17 accounting standard, the risk adjustment component is for non-financial risk including lapse risk etc. and the same need not be discounted. Hence there is no special consideration for discounting of the risk adjustment component [0.5 mark]

- Where there is an increase in uncertainty of cash flows, it may be essential to incorporate a higher risk adjustment e.g. risks with low frequency and high severity result in higher risk adjustment for non-financial risk than risks with high frequency and low severity. [0.5 mark]

[Max 20]

ii)

- In a general insurance company, there are premium reserves: Unexpired Premium reserves, Premium deficiency reserves and Claim reserves: Outstanding claims reserves (Case estimates, IBNR, IBNER. [0.5 mark]
- Premium deficiency reserve (PDR) is the difference between Unexpired Risk reserve and Unexpired premium reserve. [0.5 mark]
- Unexpired risk reserve is a prospective assessment of the amount required as at the accounting date to cover claims and expenses from the unexpired portion of risks in force. [0.5 mark]
- When the actual premium charged for unexpired policies does not cover claims and expenses for future accounting periods for which premiums have been received, then premium deficiency reserves are required. [0.5 mark]
- Hence, it is expected that there will be future claims and expenses which are not covered by the unexpired premium reserve. Though PDR is against the concept of accruals, it is necessary that it is kept as a reserve in view of adverse movements in pricing. In view of the same, it is essential to reduce the PDR while arriving at the tax liability [1 mark]
- Incurred but not reported (IBNR) reserves are needed to cover the claim payments in respect of incidents which have occurred , but have not been reported to the insurer [0.5 mark]
- Incurred but not enough reported (IBNER) reserves are needed to cover expected increases (or decreases) in case estimates for outstanding claims. [0.5 mark]
- Since IBNR and IBNER have been estimated based on the past development pattern of claims and are expected to be reported to the insurer in the coming months/years, it is essential to hold them for risks underwritten by the insurer. In view of the same, it is essential to consider exclusion of IBNR with IBNER from computation of tax liability [1 mark]

[Max 5]

[25 Marks]

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